

(1) ASHRAE Handbook of Fundamentals, 1997 Inch-Pound Edition, IBR approved for § 3285.503(a)(1)(i)(A).

(2) [Reserved]

(e) The materials listed below are available for purchase from American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428-2959.

(1) ASTM C 90-02a, Standard Specification for Loadbearing Concrete Masonry Units, 2002, IBR approved for § 3285.312(a)(1)(i).

(2) ASTM D 1586-99, Standard Test Method for Penetration Test and Split-Barrel Sampling of Soils, 1999, IBR approved for the table at § 3285.202(c).

(3) ASTM D 2487-00, Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System), 2000, IBR approved for the table at § 3285.202(c).

(4) ASTM D 2488-00, Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), 2000, IBR approved for the table at § 3285.202(c).

(5) ASTM D 3953-97, Standard Specification for Strapping, Flat Steel and Seals, 1997, IBR approved for § 3285.402(b)(2) and Note 10 to Table 1 to § 3285.402.

(f) The materials listed below are available for purchase from American Wood-Preservers' Association (AWPA), P.O. Box 388, Selma, Alabama 36702.

(1) AWP A M4-02, Standard for the Care of Preservative-Treated Wood Products, 2002, IBR approved for § 3285.312(a)(2)(iii).

(2) AWP A U1-04, Use Category System; User Specification for Treated Wood, 2004, IBR approved for §§ 3285.303(b)(1), 3285.312(a)(2)(ii), and 3285.504(c).

(g) The materials listed below are available for purchase from the Federal Emergency Management Administration (FEMA), 500 C Street, SW., Washington, DC 20472.

(1) FEMA 85/September 1985, Manufactured Home Installation in Flood Hazard Areas, 1985, IBR approved for § 3285.102(d)(3).

(2) [Reserved]

(h) The materials listed below are available for purchase from the National Fire Protection Association

(NFPA), 1 Batterymarch Park, Quincy, Massachusetts 02169-7471.

(1) NFPA 31, Standard for the Installation of Oil Burning Equipment, 2001 edition, IBR approved for §§ 3285.905(a) and 3285.905(d)(3).

(2) NFPA 70, National Electrical Code, 2005 edition, IBR approved for §§ 3285.702(e)(1) and 3285.906.

(3) NFPA 501A, Standard for Fire Safety Criteria for Manufactured Home Installations, Sites, and Communities, 2003 edition, IBR approved for § 3285.101.

(i) The materials listed below are available for purchase from the Structural Engineering Institute/American Society of Civil Engineers (SEI/ASCE), 1801 Alexander Bell Drive, Reston, Virginia 20191.

(1) SEI/ASCE 32-01, Design and Construction of Frost-Protected Shallow Foundations, 2001, IBR approved for §§ 3285.312(b)(2)(ii) and 3285.312(b)(3)(ii).

(2) [Reserved]

(j) The materials listed below are available for purchase from Underwriters Laboratories (UL), 333 Pfingsten Road, Northbrook, Illinois 60062.

(1) UL 181A, Closure Systems for Use With Rigid Air Ducts and Air Connectors, 1994, with 1998 revisions, IBR approved for § 3285.606(a).

(2) UL 181B, Closure Systems for Use With Flexible Air Ducts and Air Connectors, 1995, with 1998 revisions, IBR approved for § 3285.606(a).

§ 3285.5 Definitions.

The definitions contained in this section apply to the terms used in these Model Installation Standards. Where terms are not included, common usage of the terms applies. The definitions are as follows:

Act. The National Manufactured Housing Construction and Safety Standards Act of 1974, 42 U.S.C. 5401-5426.

Anchor assembly. Any device or other means designed to transfer home anchoring loads to the ground.

Anchoring equipment. Ties, straps, cables, turnbuckles, chains, and other approved components, including tensioning devices that are used to secure a manufactured home to anchor assemblies.

Anchoring system. A combination of anchoring equipment and anchor assemblies that will, when properly designed and installed, resist the uplift, overturning, and lateral forces on the manufactured home and on its support and foundation system.

Approved. When used in connection with any material, appliance or construction, means complying with the requirements of the Department of Housing and Urban Development.

Arid region. An area subject to 15 inches or less of annual rainfall.

Base flood. The flood having a one percent chance of being equaled or exceeded in any given year.

Base flood elevation (BFE). The elevation of the base flood, including wave height, relative to the datum specified on a LAHJ's flood hazard map.

Comfort cooling certificate. A certificate permanently affixed to an interior surface of the home specifying the factory design and preparations for air conditioning the manufactured home.

Crossovers. Utility interconnections in multi-section homes that are located where the sections are joined. Crossover connections include heating and cooling ducts, electrical circuits, water pipes, drain plumbing, and gas lines.

Design Approval Primary Inspection Agency (DAPIA). A state or private organization that has been accepted by the Secretary in accordance with the requirements of Part 3282, Subpart H of this chapter, which evaluates and approves or disapproves manufactured home designs and quality control procedures.

Diagonal tie. A tie intended to resist horizontal or shear forces, but which may resist vertical, uplift, and overturning forces.

Flood hazard area. The greater of either: The special flood hazard area shown on the flood insurance rate map; or the area subject to flooding during the design flood and shown on a LAHJ's flood hazard map, or otherwise legally designated.

Flood hazard map. A map delineating the flood hazard area and adopted by a LAHJ.

Footing. That portion of the support system that transmits loads directly to the soil.

Foundation system. A system of support that is capable of transferring all design loads to the ground, including elements of the support system, as defined in this section, or a site-built permanent foundation that meets the requirements of 24 CFR 3282.12.

Ground anchor. A specific anchoring assembly device designed to transfer home anchoring loads to the ground.

Installation instructions. DAPIA-approved instructions provided by the home manufacturer that accompany each new manufactured home and detail the home manufacturer requirements for support and anchoring systems, and other work completed at the installation site to comply with these Model Installation Standards and the Manufactured Home Construction and Safety Standards in 24 CFR part 3280.

Installation standards. Reasonable specifications for the installation of a new manufactured home, at the place of occupancy, to ensure proper siting; the joining of all sections of the home; and the installation of stabilization, support, or anchoring systems.

Labeled. A label, symbol, or other identifying mark of a nationally recognized testing laboratory, inspection agency, or other organization concerned with product evaluation that maintains periodic inspection of production of labeled equipment or materials, and by whose labeling is indicated compliance with nationally recognized standards or tests to determine suitable usage in a specified manner.

Listed or certified. Included in a list published by a nationally recognized testing laboratory, inspection agency, or other organization concerned with product evaluation that maintains periodic inspection of production of listed equipment or materials, and whose listing states either that the equipment or material meets nationally recognized standards or has been tested and found suitable for use in a specified manner.

Local authority having jurisdiction (LAHJ). The state, city, county, city and county, municipality, utility, or organization that has local responsibilities and requirements that must be complied with during the installation of a manufactured home.

Lowest floor. The floor of the lowest enclosed area of a manufactured home. An unfinished or flood-resistant enclosure, used solely for vehicle parking, home access, or limited storage, must not be considered the lowest floor, provided the enclosed area is not constructed so as to render the home in violation of the flood-related provisions of this standard.

Manufactured home. A structure, transportable in one or more sections, which in the traveling mode is 8 body feet or more in width or 40 body feet or more in length, or which when erected on site is 320 or more square feet, and which is built on a permanent chassis and designed to be used as a dwelling with or without a permanent foundation when connected to the required utilities, and includes the plumbing, heating, air-conditioning, and electrical systems contained in the structure. This term includes all structures that meet the above requirements, except the size requirements and with respect to which the manufacturer voluntarily files a certification, pursuant to § 3282.13 of this chapter, and complies with the MHCSS set forth in part 3280 of this chapter. The term does not include any self-propelled recreational vehicle. Calculations used to determine the number of square feet in a structure will include the total of square feet for each transportable section comprising the completed structure and will be based on the structure's exterior dimensions measured at the largest horizontal projections when erected on-site. These dimensions will include all expandable rooms, cabinets, and other projections containing interior space, but do not include bay windows. Nothing in this definition should be interpreted to mean that a manufactured home necessarily meets the requirements of HUD's Minimum Property Standards (HUD Handbook 4900.1) or that it is automatically eligible for financing under 12 U.S.C. 1709(b) certification.

Manufactured Home Construction and Safety Standards or MHCSS. The Manufactured Home Construction and Safety Standards established in part 3280 of this chapter, pursuant to section 604 of the Act, 42 U.S.C. 5403.

Manufactured home gas supply connector. A listed connector designed for connecting the manufactured home to the gas supply source.

Manufactured home site. A designated parcel of land designed for the installation of one manufactured home for the exclusive use of the occupants of the home.

Manufactured Housing Consensus Committee or MHCC. The consensus committee established pursuant to section 604(a)(3) of the Act, 42 U.S.C. 5403(a)(3).

Model Installation Standards. The installation standards established in part 3285 of this chapter, pursuant to section 605 of the Act, 42 U.S.C. 5404.

Pier. That portion of the support system between the footing and the manufactured home, exclusive of shims. Types of piers include, but are not limited to: Manufactured steel stands; pressure-treated wood; manufactured concrete stands; concrete blocks; and portions of foundation walls.

Ramada. Any freestanding roof or shade structure, installed or erected above a manufactured home or any portion thereof.

Secretary. The Secretary of Housing and Urban Development, or an official of HUD delegated the authority of the Secretary with respect to the Act.

Skirting. A weather-resistant material used to enclose the perimeter, under the living area of the home, from the bottom of the manufactured home to grade.

Stabilizing devices. All components of the anchoring and support systems, such as piers, footings, ties, anchoring equipment, anchoring assemblies, or any other equipment, materials, and methods of construction, that support and secure the manufactured home to the ground.

State. Each of the several states, the District of Columbia, the Commonwealth of Puerto Rico, Guam, the Virgin Islands, and American Samoa.

Support system. Pilings, columns, footings, piers, foundation walls, shims, and any combination thereof that, when properly installed, support the manufactured home.

Tie. Straps, cable, or securing devices used to connect the manufactured home to anchoring assemblies.

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Ultimate load. The absolute maximum magnitude of load that a component or system can sustain, limited only by failure.

Utility connection. The connection of the manufactured home to utilities that include, but are not limited to, electricity, water, sewer, gas, or fuel oil.

Vertical tie. A tie intended to resist uplifting and overturning forces.

Wind zone. The areas designated on the Basic Wind Zone Map, as further defined in § 3280.305(c) of the Manufactured Home Construction and Safety Standards in this chapter, which delineate the wind design load requirements.

Working load. The maximum recommended load that may be exerted on a component or system determined by dividing the ultimate load of a component or system by an appropriate factor of safety.

§ 3285.6 Final leveling of manufactured home.

The manufactured home must be adequately leveled prior to completion of the installation, so that the home's performance will not be adversely affected. The home will be considered adequately leveled if there is no more than ¼ inch difference between adjacent pier supports (frame or perimeter) and the exterior doors and windows of the home do not bind and can be properly operated.

Subpart B—Pre-Installation Considerations

§ 3285.101 Fire separation.

Fire separation distances must be in accordance with the requirements of Chapter 6 of NFPA 501A, 2003 edition (incorporated by reference, see § 3285.4) or the requirements of the LAHJ. The installation instructions must clearly indicate this requirement in a separate section and must caution installers to take into account any local requirements on fire separation.

§ 3285.102 Installation of manufactured homes in flood hazard areas.

(a) *Definitions.* Except to the extent otherwise defined in Subpart A, the terms used in this subpart are as de-

fined in 44 CFR 59.1 of the National Flood Insurance Program (NFIP) regulations.

(b) *Applicability.* The provisions of this section apply to the initial installation of new manufactured homes located wholly or partly within a flood hazard area.

(c) *Pre-installation considerations.* Prior to the initial installation of a new manufactured home, the installer is responsible for determining whether the manufactured home site lies wholly or partly within a special flood hazard area as shown on the LAHJ's Flood Insurance Rate Map, Flood Boundary and Floodway Map, or Flood Hazard Boundary Map, or if no LAHJ, in accordance with NFIP regulations. If so located, and before an installation method is agreed upon, the map and supporting studies adopted by the LAHJ must be used to determine the flood hazard zone and base flood elevation at the site.

(d) *General elevation and foundation requirements.*

(1) *Methods and practices.* Manufactured homes located wholly or partly within special flood hazard areas must be installed on foundations engineered to incorporate methods and practices that minimize flood damage during the base flood, in accordance with the requirements of the LAHJ, 44 CFR 60.3(a) through (e), and other provisions of 44 CFR referenced by those paragraphs.

(2) *Outside appliances.*

(i) Appliances installed on the manufactured home site in flood hazard areas must be anchored and elevated to or above the same elevation as the lowest elevation of the lowest floor of the home.

(ii) Appliance air inlets and exhausts in flood hazard areas must be located at or above the same elevation as the lowest elevation of the lowest floor of the home.

(3) *Related guidance.* Refer to FEMA 85/September 1985, Manufactured Home Installation in Flood Hazard Areas, 1985 (incorporated by reference, see § 3285.4).

§ 3285.103 Site suitability with design zone maps.

Prior to the initial installation of a new manufactured home and as part of